

REMARKS/ARGUMENTS

Drawing Objection

Figure 1 was objected for improperly identifying the calcium chloride slurry as calcium fluoride slurry. Applicant submits a replacement drawing to overcome the examiner's objection. The same correction was also implemented for Figure 2.

35 USC § 112, first paragraph

Claims 1, 3, 6-7, 9, and 12-13 were rejected under 35 USC § 112, 1st as being failing to comply with the written description requirement. The applicant respectfully disagrees for various reasons. Nevertheless, Claim 1 has been amended and now requires a step of reacting a fluoride-containing effluent that has a pH 3 or higher together with an aqueous calcium chloride solution into a reactor under acidic condition with hydrochloric acid to deposit calcium fluoride particles, wherein the acidic condition is pH 2 or lower. Support is found on page 6, lines 3-9, and for pH 1.5 and lower in the examples 1-6. Claim 7 has been amended to specify that the effluent is a 2.2% to 17.2% hydrofluoric acid-containing effluent. The examiner's rejection should therefore be overcome.

35 USC § 112, second paragraph

Claims 1, 3, 7, 9, and 13 were rejected under 35 USC § 112, 1st as being indefinite for use of the phrase "...and provides a produced or residual quantity of hydrochloric acid..." The applicant amended claims 1 and 7 to clarify that the hydrochloric acid is produced in the reacting step or is supplied externally. Furthermore, the lack of antecedent basis was corrected in claims 3 and 9. The rejections should therefore be overcome.

35 USC § 103

Claims 1, 3, 7, and 9 were rejected under 35 USC § 103 as being obvious over JP 11-130427 in view of Johansing (U.S. Pat. No. 5,705,140). The applicant respectfully disagrees for various reasons.

It is noted that in view of the above amendments, the rejection should be overcome. Still further, it is noted that the examiner appears to argue that (a) the process conditions would be

identical other than the order of addition of reagents, and (b) the pH would not be a patentable difference as the reaction would still be carried out by adding sufficient HCl to maintain the pH at 1.5 or lower. Such reasoning is not persuasive. It should be noted that the reaction product of the '427 reference is a nanocolloid solution of CaF₂, which is contrary to the claimed size range in the instant claims. Thus, the '427 reference also requires addition of base to so precipitate the CaF₂ product, which of course, is not required in the instant case. A combination with Johansing fails to remedy such defect.

Regarding the examiner's reference to column 5, line 66 in the '140 reference it is noted that the calcium chloride is produced by an entirely different process. Indeed, calcium chloride is produced in the removal of chlorine from the gases from reactions (h) and (j), which is clearly inconsistent with the reuse and recycle steps in the present claims. Therefore, the rejection is improper and should be overcome.

Claim 13 was rejected under 35 USC § 103 as being obvious over JP 11-130427 and Johansing as applied above in further Ohmi et al. (U.S. Pat. No. 5,362,461). The applicant again respectfully disagrees for various reasons.

As noted above, the rejection based on '427 and Johansing is improper and combination with Ohmi fails to remedy these defects. Still further, and as already noted in applicant's prior response, it should be stressed that hydrogen fluoride is directly produced in a reaction process employing sulfuric acid (see *e.g.*, col 3, ln 15 et seq.). Thus, the '461 reference teaches against the combination with JP '427 and JP '498. Consequently, the rejection should be withdrawn.

Request for Allowance

In view of the present amendments and arguments, the applicant believes that all claims are now in condition for allowance. Therefore, the applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,
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